

Application number 09/837,897
Amendment dated November 3, 2004
Reply to office action mailed May 5, 2004

PATENT

REMARKS/ARGUMENTS

After entry of this amendment, claims 18-37 will remain pending in this application. Claims 18, 23, 24, and 25 have been amended. Specifically, claim 23 has been amended to correct a typographical oversight. Claims 18, 24, and 25 have been amended to distinguish "filter" from "loop filter" by referring to it as "first filter," this amendment is strictly one of nomenclature. Support for these amendments can be found in the specification, no new matter has been added.

Claims 23-31 stand rejected under 35 U.S.C. § 112, first paragraph. Claims 18-21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nauta, United States patent number 5,117,205 in view of Brahmhatt, United States patent number 4,442,481. Claims 22-26 and 32-37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nauta in view of Brahmhatt, in view of Chen, United States patent number 5,463,352. Reconsideration of these objections and rejections in light of these amendments and remarks, and allowance of all the pending claims, is respectfully requested.

35 U.S.C. § 112 rejections

Claims 23-31 stand rejected under 35 U.S.C. § 112, first paragraph. Specifically, the office action states that support for a loop filter cannot be found. Support for a loop filter can be found, for example, in Figure 5. Applicants submit that one skilled in the art would readily recognize that the series resistor and capacitance in Figure 5 is a loop filter.

The office action further states that support for "receiving the output signal from the loop filter with a second filter" cannot be found. Applicants submit that support for this limitation can be found, for example at Figure 1, where either element 24 or 25 corresponds to the required second filter, the control voltage is on line Vc of Figure 5, and the loop filter is as described above. Also, see for example, the pending specification, page 3, line 21, which reads "Fig. 5 is a functional block diagram of a ring oscillator which generates a control voltage, Vc, for controlling low pass filters 24, 25 in Fig. 1."

The office action also states that support for "cutoff frequency of the second filter" cannot be found. Applicants submit that support for this limitation can be found, for

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example, in the pending application at page 3, line 31, which reads in part "ring oscillator of Fig. 5 is used to control the transconductance, GM, stages within the filter and hence the cutoff frequency of filters 24, 25.

Claim 18

Claim 18 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Nauta in view of Brahmbhatt. The pending office action recognizes that Nauta does not provide "the variable resistance comprising a native MOS device" as required by the claim, but asserts that it is obvious to include a native device found in Brahmbhatt into the structure of Nauta. (See pending office action, page 4, first 3 full paragraphs.)

But there is no motivation to include the native device of Brahmbhatt in the structure of Nauta. Brahmbhatt states that a native device has a "very low threshold voltage" and that "no additional doping is necessary." (See Brahmbhatt, column 9, lines 1-20) Applicant's representative can find no indication in Nauta that either of these features would be beneficial to the transconductance circuit shown in Figure 3 and discussed in columns 9, line 30 to column 11, line 14. In fact, there does not appear to be any discussion regarding threshold voltages or additional doping in regards to this circuitry.

Moreover, the native transistor in Brahmbhatt is provided to "prevent effective conduction from word line 10 to the Vcc supply when V17 exceeds Vcc. (See Brahmbhatt column 8, line 67 to column 9, line 1.) It is not clear how this isolation function could possibly benefit the circuit in Nauta.

The only motivation to combine the native device of Brahmbhatt into the structure of Nauta comes from impermissible hindsight. The invention itself is being used as motivation to combine—there is no motivation provided by Nauta to incorporate a native device as required.

Other claims

Claims 26 and 32 should be allowed for similar reasons as claim 18. The other claims depend on these claims and should be allowed for the same reasons and for the additional limitations they recite.

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CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this application are in condition for allowance. The issuance of a formal notice of allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-752-2456.

Respectfully submitted,


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